

distillation point no greater than 210 °F, and a paraffin content greater than 65 volume percent;

(c) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point less than 193 °F, and an olefin content less than 10 volume percent;

(d) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and an olefin content less than 1 volume percent; and

(e) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, a 50% D-86 distillation point no greater than 210° F., an olefin content less than 10 vol.%, a 90% D-86 distillation point less than 300° F., and an octane value of at least 87;

and thereafter

(2) combusting the unleaded gasoline in said engine;

(3) introducing at least some of the resultant engine exhaust emissions into the catalytic converter; and

(4) discharging emissions from the catalytic converter to the atmosphere.

182. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (a).

183. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (b).

184. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (c).

185. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (d).

186. A method as defined in claim 182, 183, 184, or 185 wherein the 90% D-86 distillation point of the gasoline in step (1) is no greater than 315° F.

187. A method as defined in claim 181 wherein the unleaded gasoline in step (1) is gasoline (e).

188. A method as defined in claim 187 wherein the unleaded gasoline in step (1) has a paraffin content greater than 72 volume percent.

189. A method as defined in claim 188 wherein the unleaded gasoline in step (1) contains less than 6 volume percent olefins.

190. A method as defined in claim 182, 183, 184, 185, 187, or 189 wherein said unleaded gasoline in step (1) contains greater than 75 volume percent paraffins.

191. A method as defined in claim 187 wherein said unleaded gasoline in step (1) has an olefin content less than 4 volume percent and said unleaded gasoline in step (1) contains greater than 75 volume percent paraffins.

192. A method as defined in claim 182, 184, 187, 189, or 191 wherein said unleaded gasoline in step (1) has a 10% D-86 distillation point below 140° F.

193. A method as defined in claim 192 resulting in reductions of each of NO<sub>x</sub>, CO, and unburned hydrocarbons.

194. A method as defined in claim 193 resulting in reductions by at least 10% of any of NO<sub>x</sub>, CO, and unburned

hydrocarbons.

195. A method for operating an automotive vehicle having a spark-induced, internal combustion engine and a catalytic converter for treating emissions from said engine, the method comprising:

(1) introducing into the engine an unleaded, oxygenated gasoline selected from the group consisting of:

(a) unleaded, oxygenated gasolines having a Reid Vapor Pressure less than 7.5 psi, an octane value of at least 87, a 10% D-86 distillation point no greater than 158 °F, a 50% D-86 distillation point no greater than 215 °F, a 90% D-86 distillation point no greater than 315 °F., a paraffin content greater than 65 volume percent, and an olefin content less than 10 volume percent;

(b) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., a paraffin content greater than 65 volume percent, and a 50% D-86 distillation point no greater than 215 °F.;

(c) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., and a paraffin content greater than 70 volume percent; and

(d) unleaded, oxygenated gasolines of octane value at least 87 with a Reid Vapor Pressure less than 7.0 psi, a 10% D-86 distillation point no greater than 158° F., a 50% D-86 distillation point no greater than 215 °F., an olefin content less than 10 volume percent, and oxygenates present in a total oxygen concentration no greater than the equivalent provided by about 14.9 volume percent methyl tertiary butyl ether;

(2) combusting said unleaded gasoline in said engine to yield exhaust emissions, which, after treatment in the catalytic converter, have, in comparison to combusting fuel A/O AVE, a

reduced amount of at least one pollutant selected from the group consisting of NO<sub>x</sub>, CO, and unburned hydrocarbons; and

(3) passing emissions from said combusting in said engine through the catalytic converter.

196. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (a).

197. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (b).

198. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (c).

199. A method as defined in claim 195 wherein the unleaded, oxygenated gasoline in step (1) is gasoline (d).

200. A method as defined in claim 182, 183, 187, 189, 191, 197, 198, or 199, resulting in reductions in each of unburned hydrocarbons, CO, and NO<sub>x</sub>.

201. A method as defined in claim 196 or 199 wherein the paraffin content of the unleaded gasoline in step (1) is greater than 72 volume percent.

202. A method as defined in claim 201 wherein the olefin content of the unleaded, oxygenated gasoline of step (1) is less than 6 volume percent and the method results in reductions in each of NO<sub>x</sub>, CO, and unburned hydrocarbons.

203. A method as defined in claim 196, 197, or 199 wherein the paraffin content is greater than 75 volume percent.

204. A method as defined in claim 203 resulting in reductions in each of NO<sub>x</sub>, CO, and unburned hydrocarbons, with the reductions of at least one of NO<sub>x</sub>, CO, and unburned hydrocarbons being at least 10%.

205. A method as defined in claim 204 wherein the olefin content is less than 6 volume percent.

206. A method as defined in claim 182, 183, 184, 187, 196, 197, or 199 wherein the gasoline in step (1) contains one or more oxygenates in a total oxygen concentration between the equivalent of about 10.1 and 14.9 vol.% methyl tertiary butyl ether.

207. A method as defined in claim 206 wherein the unleaded, oxygenated gasoline in step (1) contains more than 75 volume percent paraffins.

208. A method as defined in claim 207 wherein said unleaded, oxygenated gasoline in step (1) has a 10% D86 distillation point below 140° F., and the method results in reductions in each of NO<sub>x</sub>, CO, and unburned hydrocarbons.

209. A method as defined in claim 183, 187, 196, or 199 wherein the gasoline in step (1) contains greater than 72 volume percent paraffins and one or more oxygenates in a total oxygen concentration between the equivalent of about 10.1 and 14.9 vol.% methyl tertiary butyl ether.

210. A method as defined in claim 209 resulting in reductions in each of NO<sub>x</sub>, CO, and unburned hydrocarbons.

211. A method as defined in claim 209 wherein the

unleaded, oxygenated gasoline in step (1) has an olefin content less than 6 volume percent and a paraffin content greater than 75 volume percent.

212. A method as defined in claim 211 wherein the unleaded, oxygenated gasoline in step (1) has a 50% D86 distillation point less than 200° F.

213. A method as defined in claim 182, 183, 185, 187, 188, 191, 196, 197, 198, or 199 wherein the gasoline in step (1) has a 50% D86 distillation point less than 200° F. and a 10% D86 distillation point less than 140° F.

214. A method as defined in claim 213 resulting in reductions in each of NOx, CO, and unburned hydrocarbons.

215. A method as defined in claim 214 resulting in reductions by at least 10% of any of NOx, CO, and unburned hydrocarbons.

216. A method as defined in claim 182, 183, 187, 188, 189, or 199 wherein the gasoline has a 50% D-86 distillation point less than 200 °F.

217. A method as defined in claim 182, 183, 185, 187, 188, 191, 196, 197, 198, or 199 resulting in reductions in each of NOx, CO, and unburned hydrocarbons.

218. A method as defined in claim 217 resulting in reductions by at least 10% of any of NOx, CO, and unburned hydrocarbons.

219. A method as defined in claim 218 wherein said

catalytic converter is a three-way catalytic converter.

220. A method as defined in claim 182, 183, 185, 187, 188, 189, 191, 196, 197, 198, or 199 wherein said catalytic converter is a three-way catalytic converter.

221. A method as defined in claim 190 wherein said catalytic converter is a three-way catalytic converter.

222. A method as defined in claim 194 wherein said catalytic converter is a three-way catalytic converter.

223. A method as defined in claim 200 wherein said catalytic converter is a three-way catalytic converter.

224. A method as defined in claim 205 wherein said catalytic converter is a three-way catalytic converter.

225. A method as defined in claim 213 wherein said catalytic converter is a three-way catalytic converter.

226. A method as defined in claim 215 wherein said catalytic converter is a three-way catalytic converter.

227. A method as defined in claim 216 wherein said catalytic converter is a three-way catalytic converter.

228. A method as defined in claim 217 wherein said catalytic converter is a three-way catalytic converter.